

## A Rare Case of Compartment Syndrome in Isolated Fibula Fracture

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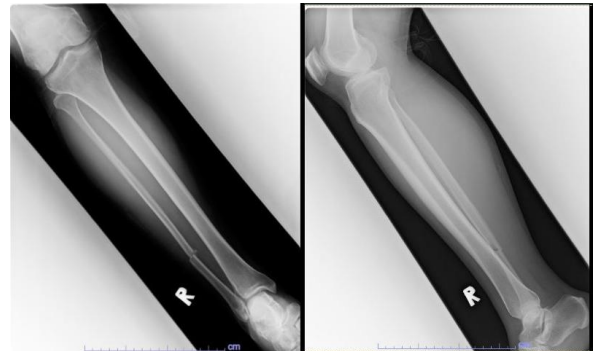
### Introduction:

Compartment syndrome is an orthopedics emergency that occurs when the pressure within a closed osseofascial compartment exceeds the perfusion and results in tissue ischaemia. In the lower limb, it is commonly reported in tibial plateau, tibial shaft and tibial plafond fracture. We describe a rare case of acute compartment syndrome in an isolated fibular fracture.

### Report:

A 30 years old male with underlying intellectual disability was involved in a motor-vehicle accident and sustained closed right distal third fibula fracture. During initial examination, the right calf was swollen, however compartments were soft with tolerable pain upon passive dorsiflexion/plantarflexion of the ankle. Radiographs revealed an isolated fracture over the distal third right fibula. He was admitted for close monitoring for the calf swelling. Upon serial examination post trauma day 1, the right leg compartments became tense with a positive stretch test. A clinical diagnosis of compartment syndrome was made and he was taken urgently to the operating theater for dual-incision fasciotomies. Intraoperatively, the muscles especially over the anterior and lateral compartments were bulging and appeared viable. Patient was brought back to the operating theater postoperative day 4 for secondary suturing and split skin graft. During 1 month follow up, there was no compartment syndrome sequelae with well-healed wounds and serial radiographs show uniting fibular fracture.

**Figure 1: Radiographs showing isolated right fibula fracture.**



### Conclusion:

Acute compartment syndrome is a well known complication following long bone fractures. However, it is rarely reported in isolated fibular fracture. This case showed the importance of considering compartment syndrome in an isolated fibular fracture by having a high index of suspicion and thorough clinical examination..

### References:

Matthews JR, Muttu C. Compartment Syndrome After Isolated Closed Transverse Fibular Shaft Fracture. *J Am Acad Orthop Surg Glob Res Rev.* 2018 Nov 26;2(11):e077. doi: 10.5435/JAAOSGlobal-D-18-00077. PMID: 30656265; PMCID: PMC6324902.